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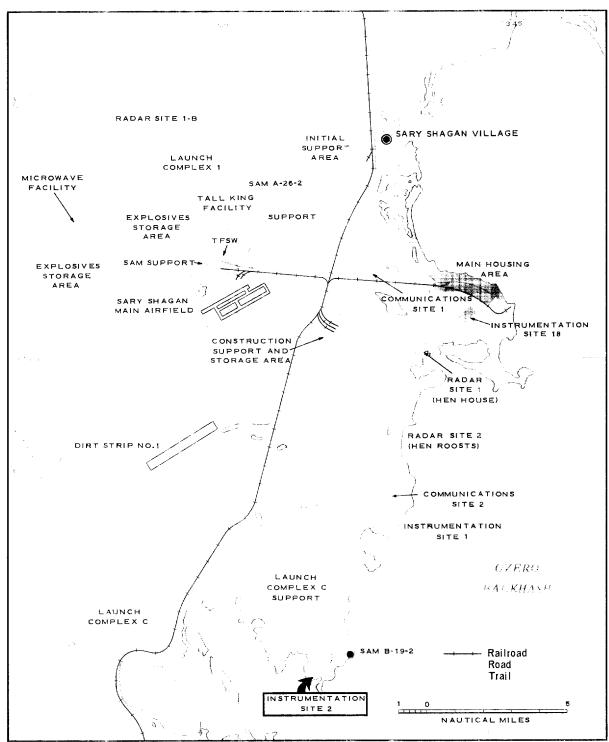
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# INSTRUMENTATION SITE 2 AND SELECTED TRIAD FACILITIES SARY SHAGAN MISSILE TEST CENTER, USSR

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SARY SHAGAN MISSILE TEST CENTER - LOCATION OF INSTRUMENTATION SITE 2, RELATIVE TO MAIN SUPPORT BASE AREA

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bserved u rema	nder constructi ining unchanged	to date.	and was comple	eted
possibly h steam plan	ousing low volt t, a water pump	age switching equi	ipment, a secur nk of cooling t	y 35 foot structure, rity building, a towers, two buried
perations	Area B (Figure	s 4, 6, 7, and Tal	ole I)	
large and	two small build and str	andard triad electings. First obseructurally complete eno major changes	rved under cons	consisting of one struction this facility
during the observatio	construction o n was verified, appeared on the	n for a roof-mount f the large build as roof construct roof over the pos	ing in the triation progressed	ad group. This d, when an elevated
possible d Pho	ish antenna on togrammetric an ical Intelligen rement was deri be subsequentl	ocument Reference top of the elevate alysis of the repo ce Division, indic ved from fair qual y confirmed or der	ed roof structuorted antenna posted it to be lity, small see	performed by the 45 feet in diameter. ale photography
This measurand cannot photograph The presert the roof such would antenna was present or one small.	ce of a relative tructure on all dindicate that a mounted above large scale phobject could be ional small obj	ation Site 2 was a cly long, blunt slope, photography an object of signer the structure dureductor	available hadow cast from hificant size, ring this periode howeheroof structu	m the mass of  possibly a dish  od. It was not  ever, at least  ure. It is possible

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surface have been noted on numerous photographic missions over the area, probably indicative of a continual maintenance or construction effort on the roof surface.

Located adjacent and parallel to the southeast wall of the large
triad building is a long, garage-type structure, normally associated
with a standard triad electronics group. The structure contains a total
of fourteen wide openings or doors in its southern wall.
Little activity has been observed around this structure. Clear, large
scale photography, showing the preliminary construction phase of a similar
triad-associated building was obtained of Moscow Probable ABM Complex E15-1
This typical garage-type structure had not
progressed beyond preliminary construction when the complex was abandoned in
Here it was revealed that the foundation consists of two parallel
rows of fourteen (approximate) compartments, instead of the
previously assumed single row of fourteen, 15 by 30 foot units. Since this
is the only large scale coverage of a triad facility which shows this
structure in an early stage of construction, it can only be assumed that
this foundation pattern is common to each of these structures at every
triad group.
A probable buried tank and a probably associated
building are located alongside the large triad building at Instrumentation
Site 2. Although no cooling towers are present, this small facility
corresponds to the similar, but somewhat more elaborate facility, with
cooling towers, located at both the Site 13 and Instrumentation Site 10
Triad Groups. Southwest of the large triad building, a shallow excavation
is present. This excavation appears to be associated with the modified
large triad building in Area A, since an angular trench connected the two on
The trench appeared to be filled when seen on large
scale photography, however, no object has been seen within the excavation
on available photography.
No significant activity has been observed at either of the two smaller
buildings in the triad group since they appeared externally complete on
Both buildings appeared to have a raised object or structure
at about the center of the roof, as viewed on successive poor to fair
quality small scale photographic missions. The raised object on the roof
of the westernmost building appeared rectangular in contrast to its smaller,
and roughly square, counterpart on the roof of the other building.
When large scale photography became available the
object on each roof appeared similar in the form of a square elevated
structure. This structure is similar to, but smaller than the elevated

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roof structure on the large triad building. A pair of small, round objects is located toward the opposite end of the roofs. Between the pair of round objects and the square structure on each building, the roof surface appears very light in tone. On the westernmost building, five light toned, linear scars or objects can be seen, randomly arranged, on the western half of the roof. One similar linear feature is present on the eastern building. Roof maintenance and/or related construction has been indicated on both buildings by a continual variance in tonal contrast of different segments of the roof. No identifiable object can be detected on either of the two elevated roof structures.

## Operations Area C (Figures 3, 4, and Table I)

Operations Area C contains as its only major structure, a probable semi-buried building. This building is connected to the area of the modified triad structure in Area A by means of a deep, open trench. A 30-foot square hardstand is located just west of the probable, semi-buried structure. No identifiable objects have ever been observed on this hardstand. A possible foundation for a tower is located midway along the inside of the northern span of the security fence, and a ground scar leads from the foundation to the modified triad building. The only significant activity observed within Area C, other than several areas of earth scraping, has been the presence of a TOKEN-type radar with five vans or vehicles at a point southeast of the semi-buried structure. This was observed on the first available photography of Instrumentation Site 2 the present time, no electronic-related equipment can be seen in the area.

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## Operations Area D (Figures 3, 4, and Table I)

Area D is located northeast of Area A and contains what appears to be either a semi-buried structure, a hardstand, or a combination of the two. Access to this facility is probably provided over a road or through a covered tunnel cableway from Area A. The road or tunnel/cableway continues north past the semi-buried structure for a distance of approximately 100 feet, at which point it terminates at a small, possible tank or domelike object. Earth spoil is extensive throughout the area. Little or no significant activity has been observed within this area since first seen possibly indicating either early completion or abandonment of the facilities contained in the area.

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	Operations Area - Miscellaneous
	A walled storage area containing two buildings is located west of the operations area (Figure $4$ ). Small amounts of equipment and/or vehicles have been seen in the area on most photographic coverage.
1	A large, self-supporting lattice tower, 450 feet in height, was noted southwest of the operations area This tower was removed by and at the same time, a new 270-foot, probable calibration tower with a base of approximately 35 by 40 feet was observed approximately 8,275 feet northwest of the modified triad building in Operations Area A. A 15 by 40 foot building is also present adjacent to the southern side of the tower base. Identification of features, if any, on top of the tower has been precluded by a lack of adequate large scale photograph However, it is believed that the tower functions in the calibration of electronic components within the large dome in Area A. Probable utility
l	Three possible foundations for towers, similar to the one in Operations Area C, are positioned outside of the main operations area (Figure 3). An additional clearing containing a small, unidentified object has been present approximately 700 feet west of the large triad building in Operations Area B.
	A large, open trench had been excavated The trench extends south from the Launch Complex C Support Area along the main road to a point just north of the cooling towers in Operations Area A (Figure 3). At the end of the trench, a small, unidentified object was present. Due to its terminal proximity to the cooling towers, and from the appearance of a possible fluid discharge from the trench at that point, it is believed that the trench contains, or will contain, a water pipeline.
	Instrumentation Site 2 receives electric power through the substation near the Housing Area in the northern section of the Main Support Base, via two probable, single-circuit, three phase, 35 kv powerlines. Each line is tied into one of the two stepdown transformers within a secured substation approximately two miles north of Site 2. Leading south from this substation, buried cables with estimated voltage capacities of from 6 to 10 kv, carry power to separate areas of Instrumentation Site 2.
I	Near the coast, east of the operations area, is an operational SA-2 SAM launch site (B 19-2) with an on-site support facility. Constructed the site has always appeared operational.
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### Support Area (Figure 8 and Table II)

Located south of the main operations area, the support area remains virtually unchanged Major facilities include a housing area containing three apartment-type barracks, an administration or direct support area with three large buildings and six smaller structures of various types, plus a motor pool. Other features include a possible communications facility, possible water pumping station, a secured storage area, and miscellaneous minor support and storage areas throughout the site. A centrally located steam plant, a water standpipe, and numerous small structures are also present within the support area.

### COMPARISON OF TRIAD FACILITIES AT SARY SHAGAN MISSILE TEST CENTER

As shown in Figure 2, four Triad Electronics Groups exist at the Sary Shagan Missile Test Center. The Triad at Launch Complex B (Facility C) is complete and probably operational, with environmental domes in place on each of the three buildings (Figure 13). Recent detailed reports provide information on this Triad Facility. Consequently, only the Triad groups at Instrumentation Sites 2 and 10, plus Site 13 will be described and compared.

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Instrumentation Site 10 (Figures 11 and 12)

Construction status of the Triad Electronics Group at Instrumentation Site 10 is about the same as that of Instrumentation Site 2. Although the triads at Sites 10 and 2 both reached their present state of development the objects on the roof of the individual triad buildings at Site 10 are the least developed of the three triad groups.

The roof facility on the large triad building appears as a 35-foot square elevated structure without the attached lower section seen on the other three large triad buildings. On top of the elevated square structure is a pair of adjoining objects. Extensive construction or maintenance scarring has appeared on and about the roof structures. On the roof of each of the two smaller triad buildings, facilities consist of an elevated structure of undetermined size on the northern building, and a possible structural foundation, imaged as a dark tone, on the southern small building. A roughly circular clearing, probably for a tower is connected to the southern small building by means of an open trench. Water storage

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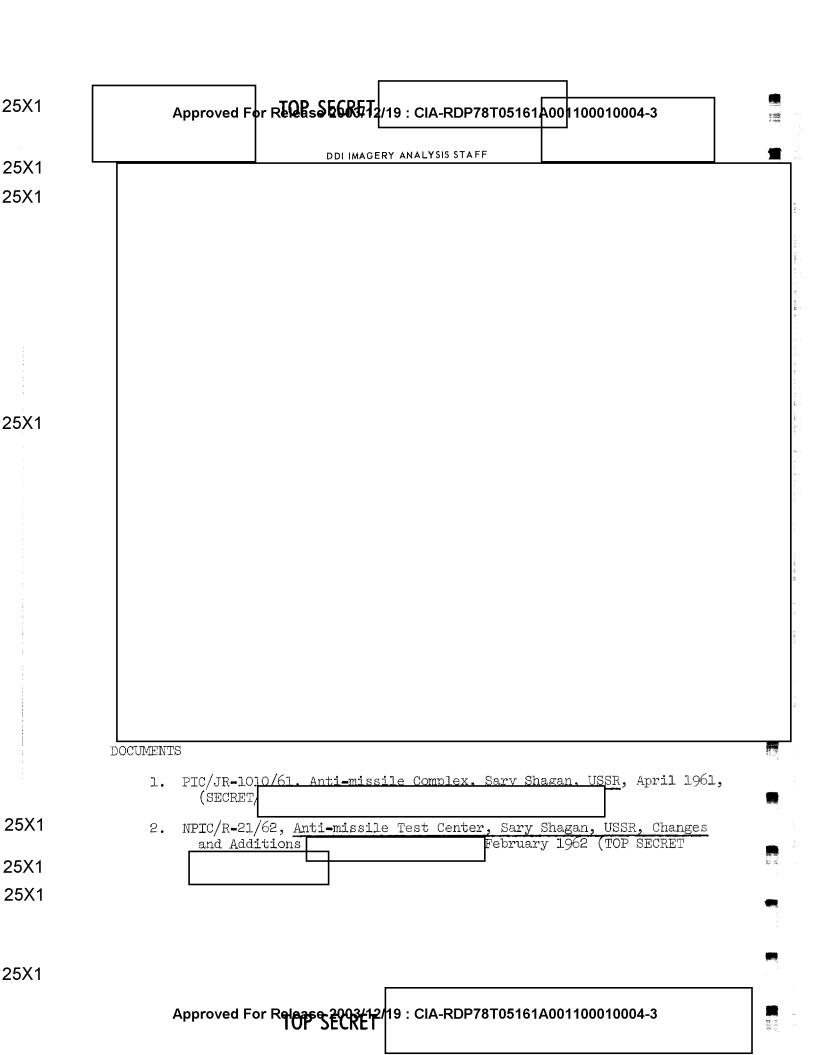
and cooling facilities observed equate closely to those at Instrumentation Site 2, consisting solely of a semi-buried tank and a probable pumphouse. It is possible that additional small liquid storage tanks are present within the excavated area around the facility, however no verification can be made due to the lack of large scale photography. A steam plant and a guard house are also present within the secured triad area.

#### DISCUSSION

Of the four triad groups at Sary Shagan, only the one at Launch Complex B (Facility C) has been completed in the manner expected. Construction on the remaining three had ceased never reaching the point where antennas and/or domes were emplaced. The individual triad buildings do, however, appear externally and structurally complete. The associated cooling facilities at Sites 2 and 10 appear to have been complete for some time, while those at Site 13 have gradually been expanded. This fact, in conjunction with the apparent four-year dormancy of the three triad groups, indicates that these three triads will probably not be utilized in their original support role in the ABM system development program at Sary Shagan but will possibly be used to fulfill local requirements at their individual sites.

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25X1	AMS Series DESPA-1, Sheet NL 43-7, Edition 1, 1962 (TOP SECRET  Site 13  AMS Series DESPA-1, Sheet NL 43-7, Edition 1, June 1962 (TOP SECRET  Instrumentation Site 10/Launch Complex B  AMS Series DESPA-1, Sheet NL 43-4, Edition 1, June 1962 (TOP SECRET	
25X1 25X1	REQUIREMENTS  C-RR4-81,445 (Revised)  C-RR4-81,445 (Supplement 1)	
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#### LIST OF FIGURES

- 1 Map Sary Shagan Missile Test Center, Location of Instrumentation Site 2, Relative to Main Support Base Area
- 2 Map Distance and Azimuthal Relationships Between Triad Electronics Groups at Sary Shagan Missile Test Center, USSR
- 3 Photo Instrumentation Site 2, Sary Shagan Missile Test Center

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- 4 Drawing Perspective of Instrumentation Site 2 Operations Area
- 5 Plan Drawing Modified Triad Facility, Instrumentation Site 2
- 6 Photo Triad Group and Modified Large Triad Building, Instrumentation Site 2
- 7 Plan Drawing Triad Electronics Group, Instrumentation Site 2
- 8 Drawing Instrumentation Site 2 Support Area
- 9 Plan Drawing Triad Electronics Group, Site 13
- 10 Photo Triad Group, Site 13
- 11 Plan Drawing Triad Electronics Group, Instrumentation Site 10
- 12 Photo Triad Group, Instrumentation Site 10
- 13 Photo Triad Group, Launch Complex B, Facility C

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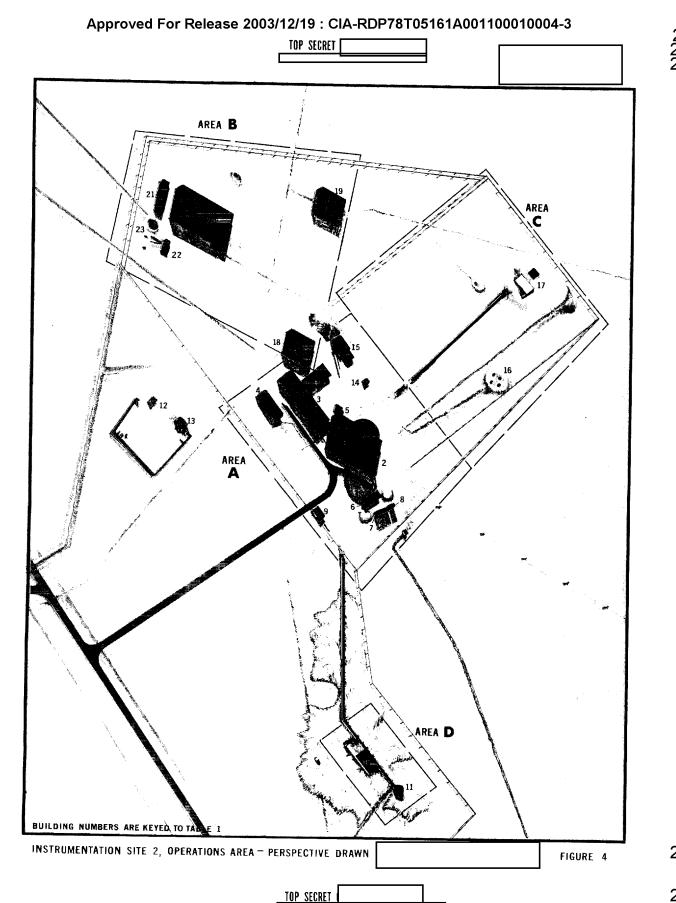
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INSTRUMENTATION SITE 2 SARY SHAGAN MISSILE TEST CENTER SMALL ARMS POSS. TOWER FOOTINGS SUPPORT AREA OPERATIONS LAKE BALKHASH

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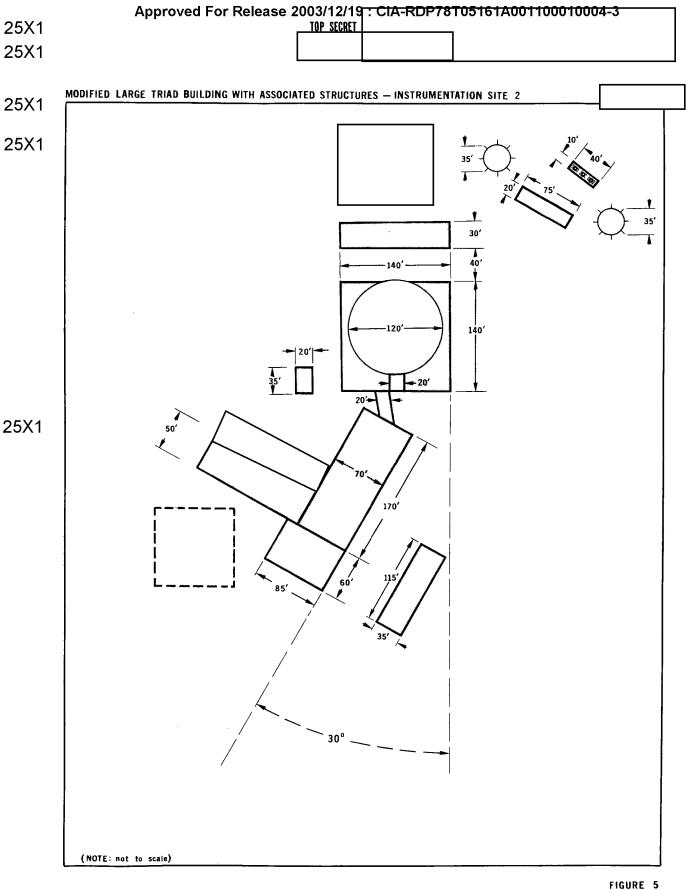


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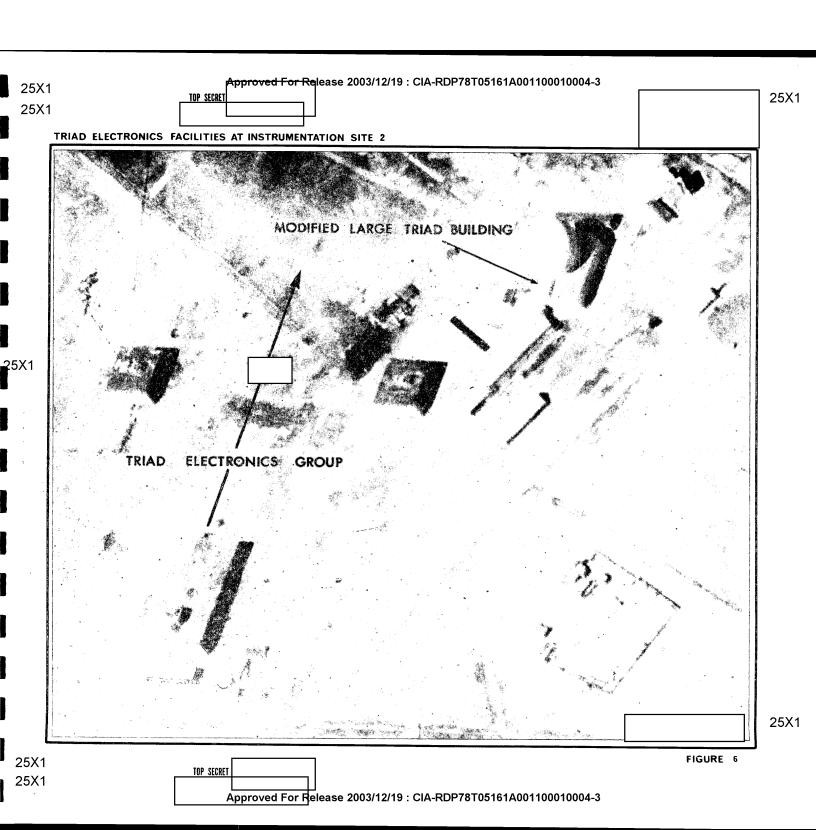


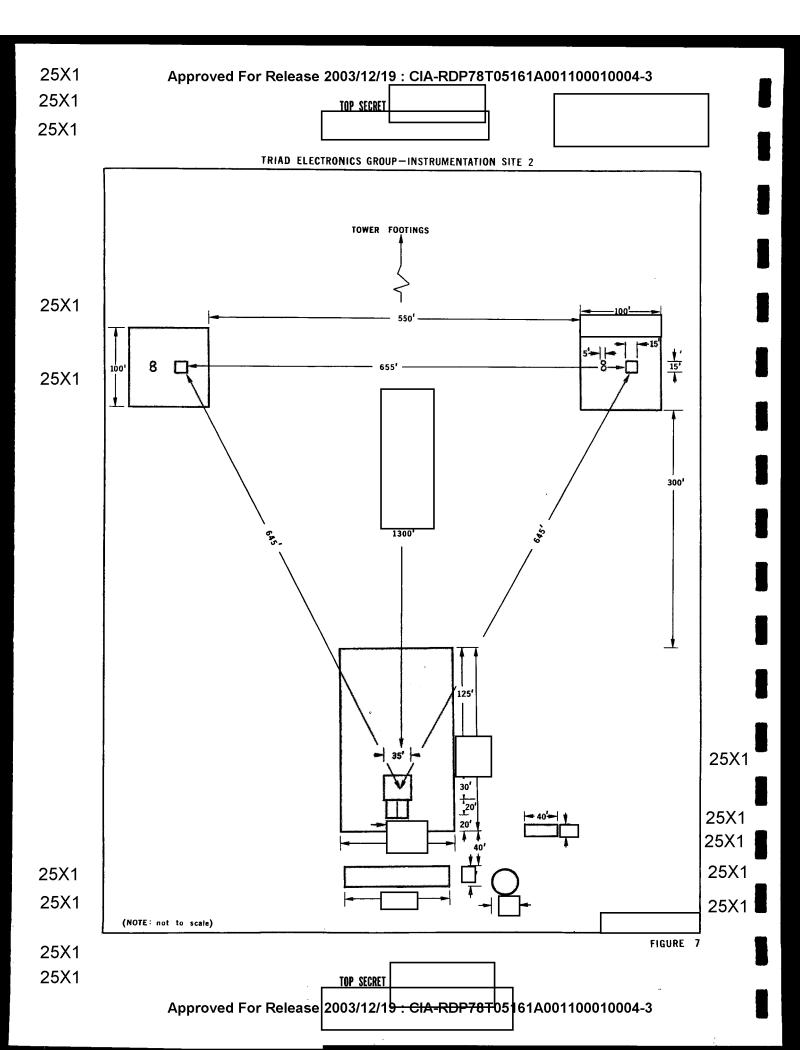
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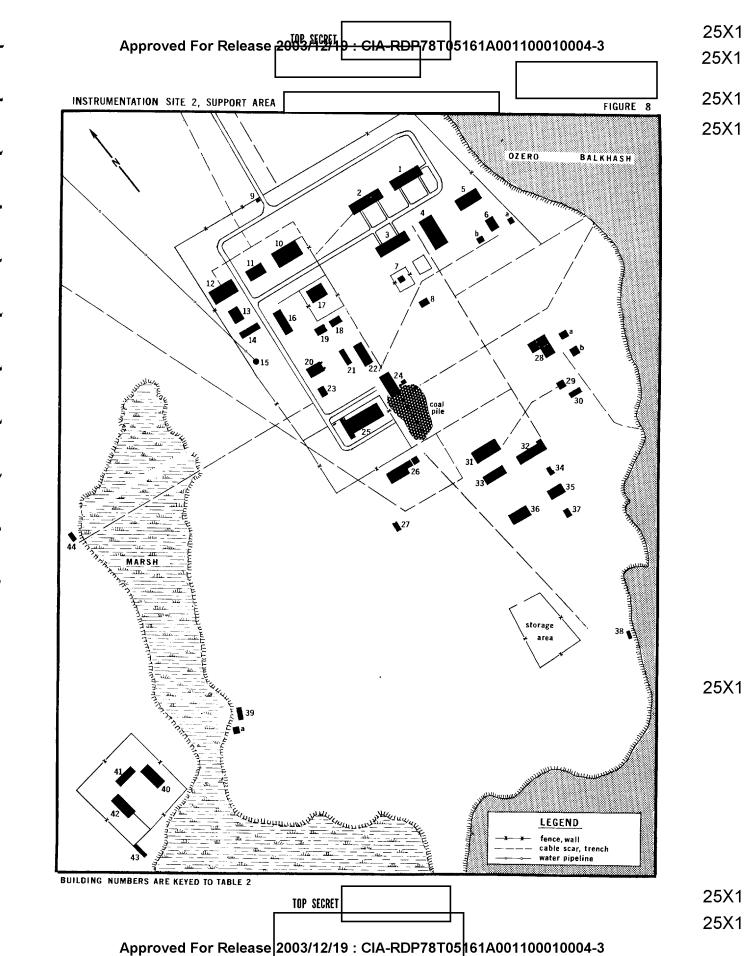
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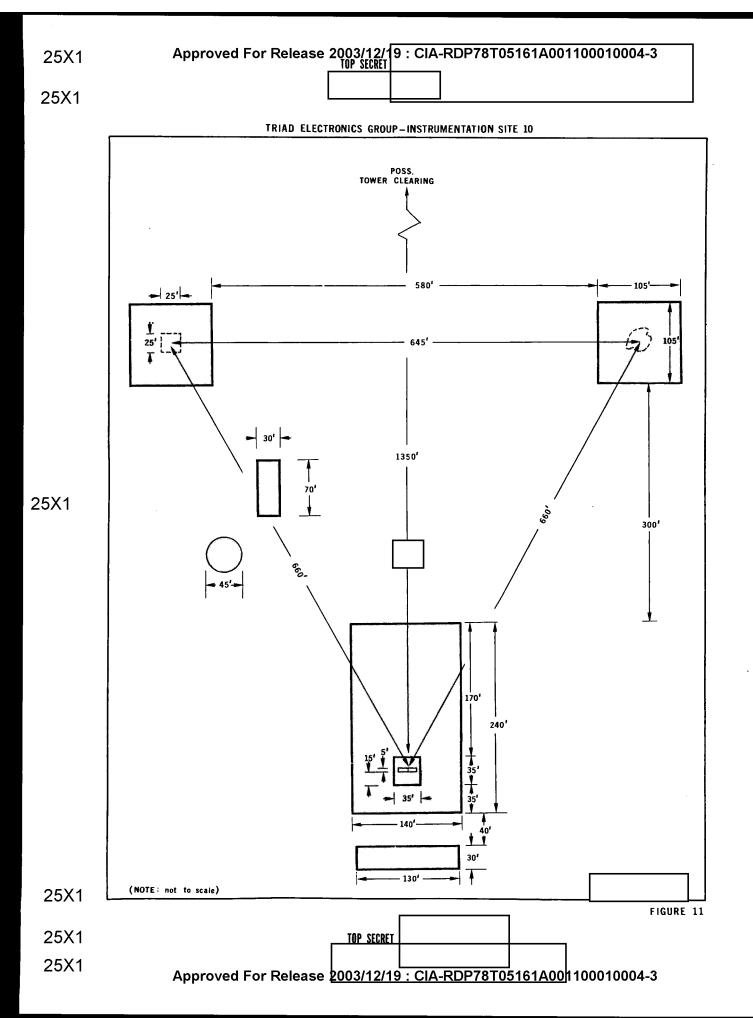
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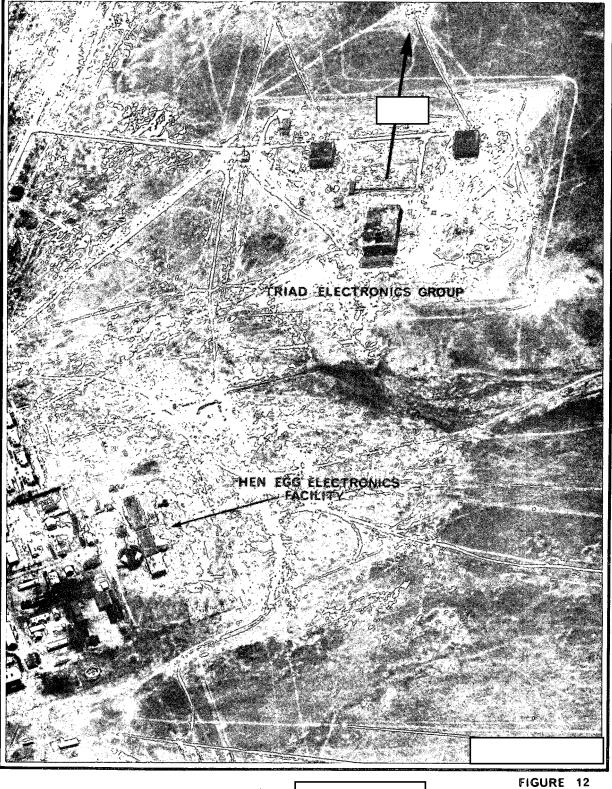
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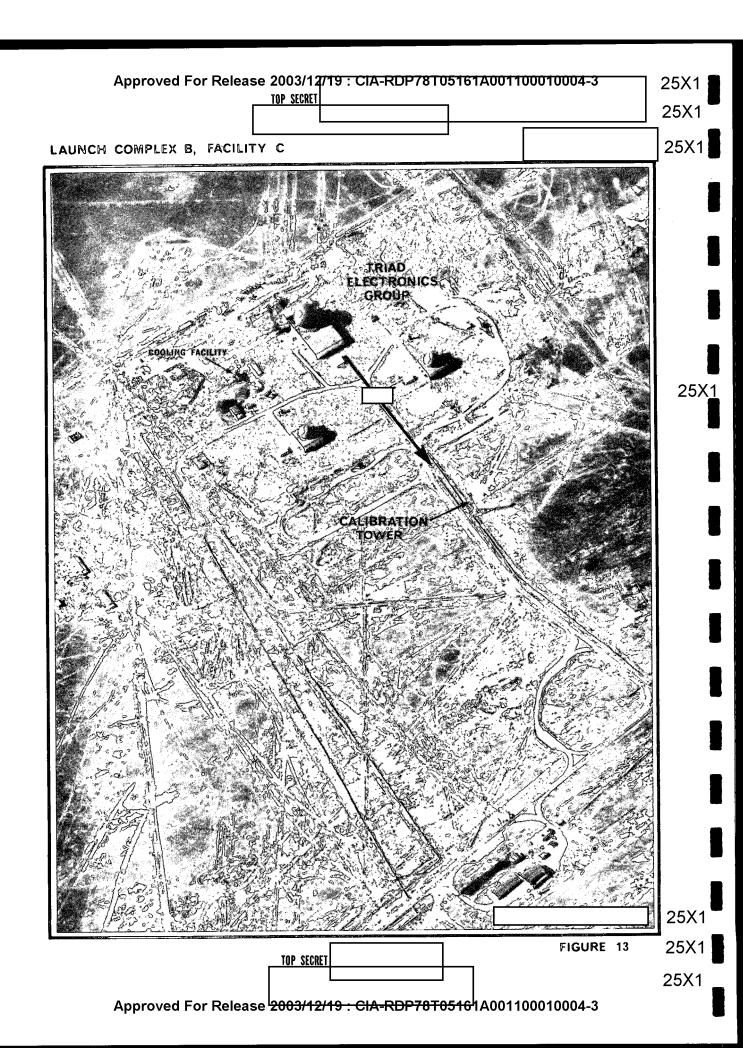


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#### TABLE I

## TABLE OF DIMENSIONS (Feet Approximate)

#### OPERATIONS AREA

Item Numbers Keyed to Figure 4

<u> Ttem</u>	Description	Dimensions (Feet)	Neight (Feet)*	Roof Type
1	Modified Large Triad Building With Radome	See Figure 5	35	Flat
2	Triad Associated Garage Type Support Structure	Sec Figure 5	1.5	Flat
3	Support	See Figure 5	Variable (10 <b>-</b> 20)	Gable/ Monitor
<b>λ</b> <sub>4</sub>	Possible Low Voltage Switching Building	See Figure 5	10	Gable
5	Support	See Figure 5	10	Flat
6	Probable Pump House	Se <b>e</b> Figure 5	Undetermined	Flat
7	Three Cell Cooling Tower	See Figure 5	50	one (see
8	Unidentified	Undetermined	Undetermined	**
9	Security Building	30 by 45	10	Gable
10	Semi-Buried Building	55 by <b>12</b> 5		Flat

<sup>\*</sup> Height of side wall--not necessarily to peak of roof

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TABLE I Continued...

Item	Description	Dimensions (Feet)	Height (Feet)*	Roof Type
11	Possible Storage Tank	25 Diameter	Undetermined	
12	Storage	25 by 35	Undetermined	Flat
13	Storage	Undetermined	Undetermined	Valley
14	Support	15 by 20	10	Flat
15	Steam Plant	40 by 60 25 by 30	Undetermined	Flat
16	Probable Tower Footings			
17	Hardstand and Semi-Buried Structure	30 by 30 50 by 70		
18	Small Triad Building	Se <b>e</b> Figure 7	35	Flat
19	Small Triad Building	See Figure 7	35	Flat
20	Large Triad B <b>ui</b> lding	Se <b>e</b> Figure 7	35	Flat
21	Triad Support	See Figure 7	15	Flat
22	Probable Pump House	Se <b>e</b> Figure 7	Undetermined	Flat
<b>2</b> 3	Buried Tank	See Figure 7		-

<sup>\*</sup> Height of side wall--not necessarily to peak of roof

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#### TABLE II

### TABLE OF DIMENSIONS (Feet Approximate)

#### SUPPORT AREA

### Item Numbers Keyed to Figure 8

Item	Description	Dimensions (Fe <b>e</b> t)	Height (Feet)*	Roof Type
1	Apartment	40 by 160		Hipped
2	Apartment	40 by 160		Hipped
3	Apartment	40 by 160		Hipped
ΣĻ	Storage	55 by 115		Hipped
.5	St <b>or</b> age	40 by 120	10	H <b>i</b> pped
6	Support	30 by 50	15	Gable
6a	Support	20 by 20	Undetermined	Flat
6ъ	Support	Undetermined	Undetermined	Shed.
7	Walled Storage Building	20 by 25 70 by 70 (wall)	Undetermined	Flat
8	Unidentified	20 by 30	Undetermined	Flat
9	Security Building	Undetermined	Undetermined	Cable
10	Support	55 by 130	30	Hipped
11	Support	140 by 80	25	Hipped
12	Support	50 by 145	15	Flat

<sup>\*</sup> Height of side wall--not necessarily to peak of roof

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TABLE II Continued ...

Item	Description	Dimensions (Feet)	Height (Feet)*	Roof Type
13	Storage	40 by 55	10	Gable
14	Support	25 by 100	10	Gable
15	Water Stand- pipe	20 Diameter	85	
16	Support	40 by 90		Hipped
17	Support	40 by 70	15	Hipped
18	Support	25 by 50	10	Gable
19	Support	30 by 40	10	Gable
20	Support	40 by 75	15	Hipped
21	Support	25 by 60	10	Gable
22	Semi-Buried Support	35 by 85	Undetermined	Gable
23	Support	25 by 30	10	Gable
24	Steam Plant	30 by 85	Varies	Flat
25	Vehicle Mainte- nance/Storage	50 by 175 25 by 95	10	Gable
26	Support	Undetermined	Undetermined	Flat
27	Storage	20 by 25	Undetermined	Gable
28	Probable Commo	30 by 35 (West)	25	Flat
	Facility, L-Shaped Building	30 by 35	45	Flat
	with Possible Mast on South	(Center) 35 by 40	10	Flat
	Wing	(South) Undetermined (Mast)	Undetermined	

<sup>\*</sup> Height of side wall--not necessarily to peak of roof

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TABLE II Continued...

:	Item	Description	Dimensions (Feet)	Height (Feet)*	Roof Type
: <b>:</b>	28a	Support With Tower (Tower)	20 by 25	15 60	Flat 
	28b	Support	20 by 40	3.0	Flat
J	29	Support	Undetermined	Undetermined	Undetermined
25X1	30	Support		15	Shed
<b>*</b>	31	Support	40 by 125	10	Gable/Flat
	32	Support	35 by 120	10	Gable
	33	Support	30 by 95	10	Gable
_	34	Unidentified	Undetermined	Undetermined	Undetermined
	35	Support	30 by 55	1.0	Gable
	36	Bunkered Storage	Undetermined	Undetermined	Gable
i	37	Unidentified	Undetermined	Undetermined	Flat
	38	Support	35 by 40	Undetermined	Flat
:	39	Support	20 by 35	10	Flat
	39a	Support	25 by 25	Undetermined	Undetermined
_	40	Support	30 by 90		Gable 25X1
	41	Support	20 by 75		Gable
_	42	Support	30 by 90		Gable
	43	Support	20 by 50	Undetermined	Undetermined
25X1	1+2+	Support			Flat 25X1

 $<sup>\</sup>star$  Height of side wall--not necessarily to peak of roof

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